

ORDER

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

4630.9

1/18/78

SUBJ: FAA COMPUTER SOFTWARE QUALITY PROGRAM REQUIREMENTS

1. PURPOSE. This order establishes criteria and provides procedural guidelines for the implementation of FAA-STD-018, "Computer Software Quality Program Requirements."
2. DISTRIBUTION. This order is distributed in FAA headquarters to the branch level in Airway Facilities Service, Air Traffic Service, Flight Standards Service, Logistics Service, and Systems Research and Development Service; to the branch level in Regional Airway Facilities and Logistics Divisions; and to division level in the Aeronautical Center and NAFEC.
3. BACKGROUND. FAA Standard -013, "Quality Control Program Requirements," and -016, "Quality Control System Requirements" are the primary quality program documents utilized in FAA contracts. FAA-STD-013 defines the minimum contents of an "inspection" system designed primarily to detect any hardware deficiencies which exist at the time a product is inspected or tested. FAA-STD-016 implements a "total" quality control system designed to prevent, as well as detect, deficiencies, and it emphasizes the contractor's responsibility for the quality of the product delivered to the FAA. While both of the aforementioned documents require the control of computer software as a portion of the product or system delivered to the FAA, they provide minimal definitive requirements directly pertinent to computer software. In view of this condition and in recognition of the increasing magnitude and importance of computer software in the NAS systems and equipment, FAA-STD-018 has been issued. It identifies specific controls to be implemented and maintained for the entire process of developing computer software, from design through delivery. Although it is intended to normally supplement FAA-STD-013 and 016, it may be used independently when computer software is procured without hardware.
4. APPLICABILITY. FAA-STD-018 shall be considered for application to NAS systems and equipment procurements which involve a development period of at least one year and which also involve one or more of the following:
 - a. Complex computer programs or documentation.
 - b. Critical computer programs requiring high reliability and maintainability.

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5. PROCEDURES. The following are actions to be taken to implement FAA-STD-018:

a. The Policy and Plans Division (ALG-100) of the Logistics Service shall consider the applicability of FAA-STD-018 at the time of preparation of Advanced Procurement Plans and Acquisition Papers. In this regard, they shall consult the Industrial Division (ALG-400) and the technical requirements organization for recommendations. The latter two offices, however, may make such recommendations at any other appropriate stage in the procurement cycle, prior to issue of the solicitation.

b. The Contracts Division (ALG-300) shall include in the solicitation the requirement for submittal of a Computer Software Quality Program Plan (CSQPP) in compliance with FAA-STD-018 as follows:

(1) When only FAA-STD-018 is applicable, the CSQPP shall be submitted with the technical proposals.

(2) When FAA-STD-018 and FAA-STD-016 are applicable, the quality plans, CSQPP and Quality Control System Plan (QCSP) respectively, shall be submitted with the technical proposals.

(3) When FAA-STD-018 and FAA-STD-013 are applicable, the quality plans, CSQPP and Quality Control Program Plan (QCPP) respectively, shall be submitted after award in accordance with the contract.

c. The Industrial Division and the technical requirements organization shall evaluate the CSQPP for compliance with FAA-STD-018, after its receipt in accordance with the schedule in paragraph 5.b. above.

d. The Contracts Division shall incorporate the CSQPP into the contract, after approval by the Industrial Division and the technical requirements organization.

d. The Quality and Reliability Officer (QRO) assigned to the contract involved shall monitor contractor compliance with the CSQPP.

f. The technical requirements organizations and procurement offices in the regions and centers shall, when deemed appropriate, implement the requirement for the use of FAA-STD-018, with such modification of the above procedures as is required to be compatible with their operations.



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